

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTANXR1625

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * * * * Welcome to STN International * * * * * * * * * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 DEC 05 CASREACT(R) - Over 10 million reactions available
NEWS 4 DEC 14 2006 MeSH terms loaded in MEDLINE/LMEDLINE
NEWS 5 DEC 14 2006 MeSH terms loaded for MEDLINE file segment of TOXCENTER
NEWS 6 DEC 14 CA/CAPLUS to be enhanced with updated IPC codes
NEWS 7 DEC 21 IPC search and display fields enhanced in CA/CAPLUS with the
IPC reform
NEWS 8 DEC 23 New IPC8 SEARCH, DISPLAY, and SELECT fields in USPATFULL/
USPAT2
NEWS 9 JAN 13 IPC 8 searching in IFIPAT, IFIUDB, and IFICDB
NEWS 10 JAN 13 New IPC 8 SEARCH, DISPLAY, and SELECT enhancements added to
INPADOC
NEWS 11 JAN 17 Pre-1988 INPI data added to MARPAT
NEWS 12 JAN 17 IPC 8 in the WPI family of databases including WPIFV
NEWS 13 JAN 30 Saved answer limit increased
NEWS 14 JAN 31 Monthly current-awareness alert (SDI) frequency
added to TULSA
NEWS 15 FEB 21 STN AnaVist, Version 1.1, lets you share your STN AnaVist
visualization results
NEWS 16 FEB 22 Status of current WO (PCT) information on STN
NEWS 17 FEB 22 The IPC thesaurus added to additional patent databases on STN
NEWS 18 FEB 22 Updates in EPFULL; IPC 8 enhancements added

NEWS EXPRESS FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a,
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005.
V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT
<http://download.cas.org/express/v8.0-Discover/>

| | |
|------------|---|
| NEWS HOURS | STN Operating Hours Plus Help Desk Availability |
| NEWS INTER | General Internet Information |
| NEWS LOGIN | Welcome Banner and News Items |
| NEWS PHONE | Direct Dial and Telecommunication Network Access to STN |
| NEWS WWW | CAS World Wide Web Site (general information) |

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ STN Columbus ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

FILE 'HOME' ENTERED AT 09:44:18 ON 28 FEB 2006

=> file reg
COST IN U.S. DOLLARS
FULL ESTIMATED COST

SINCE FILE ENTRY
TOTAL SESSION
0.21 0.21

FILE 'REGISTRY' ENTERED AT 09:44:27 ON 28 FEB 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 26 FEB 2006 HIGHEST RN 875270-69-2
DICTIONARY FILE UPDATES: 26 FEB 2006 HIGHEST RN 875270-69-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

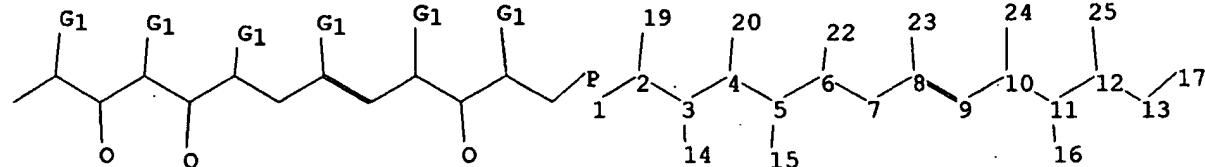
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Structure search iteration limits have been increased. See HELP SLIMITS
for details.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=>
Uploading C:\Program Files\Stnexp\Queries\10817532.str



chain nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 19 20 22 23 24 25
chain bonds :
1-2 2-3 2-19 3-4 3-14 4-5 4-20 5-6 5-15 6-7 6-22 7-8 8-9 8-23 9-10
10-11 10-24 11-12 11-16 12-13 12-25 13-17
exact/norm bonds :
2-19 3-14 4-20 5-15 6-22 8-23 10-24 11-16 12-25
exact bonds :
1-2 2-3 3-4 4-5 5-6 6-7 7-8 8-9 9-10 10-11 11-12 12-13 13-17

G1:H,Ak

Match level :

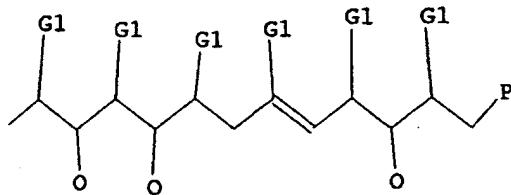
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS
19:CLASS 20:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS

L1 STRUCTURE UPLOADED

=> d 11

L1 HAS NO ANSWERS

L1 STR



G1 H,Ak

Structure attributes must be viewed using STN Express query preparation.

=> s 11

SAMPLE SEARCH INITIATED 09:44:46 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 4 TO ITERATE

100.0% PROCESSED 4 ITERATIONS
SEARCH TIME: 00.00.01

1 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 4 TO 200
PROJECTED ANSWERS: 1 TO 80

L2 1 SEA SSS SAM L1

=> s 11 full
FULL SEARCH INITIATED 09:44:56 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 61 TO ITERATE

100.0% PROCESSED 61 ITERATIONS
SEARCH TIME: 00.00.01

14 ANSWERS

L3 14 SEA SSS FUL L1

=> file caplus
COST IN U.S. DOLLARS SINCE FILE TOTAL
FULL ESTIMATED COST ENTRY SESSION
166.94 167.15

FILE 'CAPLUS' ENTERED AT 09:45:02 ON 28 FEB 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 28 Feb 2006 VOL 144 ISS 10
FILE LAST UPDATED: 27 Feb 2006 (20060227/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> s 13 full
L4 18 L3

=> s 14 and py<2003
22791054 PY<2003
L5 8 L4 AND PY<2003

=> d ibib abs hitstr tot

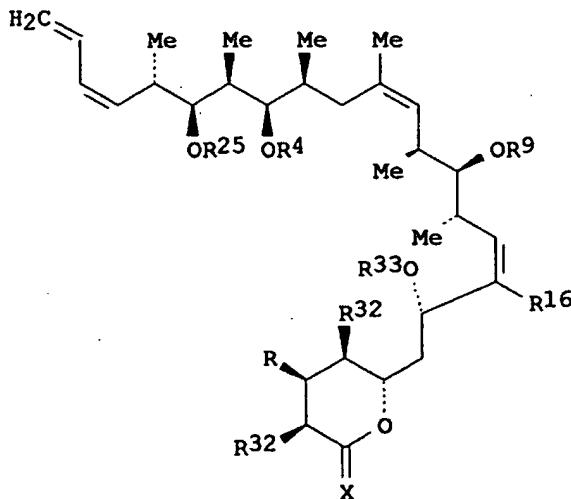
L5 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:575783 CAPLUS
DOCUMENT NUMBER: 137:125048
TITLE: Preparation of compounds which mimic the chemical and biological properties of discodermolide
INVENTOR(S): Smith, Amos B.; Beauchamp, Thomas J.; Lamarche, Matthew J.
PATENT ASSIGNEE(S): The Trustees of The University of Pennsylvania, USA
SOURCE: U.S. Pat. Appl. Publ., 127 pp., Cont.-in-part of U. S. Ser. No. 455,649.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|--------------|
| US 2002103387 | A1 | 20020801 | US 2000-730929 | 20001206 <-- |
| US 6870058 | B2 | 20050322 | | |
| US 5789605 | A | 19980804 | US 1996-759817 | 19961203 <-- |
| US 6031133 | A | 20000229 | US 1998-21878 | 19980211 <-- |
| US 6242616 | B1 | 20010605 | US 1999-455649 | 19991207 <-- |
| CA 2431045 | AA | 20020613 | CA 2001-2431045 | 20011206 <-- |
| WO 2002046150 | A2 | 20020613 | WO 2001-US47958 | 20011206 <-- |
| WO 2002046150 | A3 | 20020613 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, | | | | |

CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG,
 AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 AU 2002027375 A5 20020618 AU 2002-27375 20011206 <--
 EP 1585725 A2 20051019 EP 2001-996231 20011206
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, FI, CY, TR
 ZA 2003004259 A 20050425 ZA 2003-4259 20030530
 US 2005065353 A1 20050324 US 2004-779049 20040213
 WO 2005079378 A2 20050901 WO 2005-US4643 20050211
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
 RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
 MR, NE, SN, TD, TG

| | | |
|------------------------|-----------------|-------------|
| PRIORITY APPLN. INFO.: | US 1996-759817 | A2 19961203 |
| | US 1998-21878 | A2 19980211 |
| | US 1999-455649 | A2 19991207 |
| | US 1998-121551 | A2 19980723 |
| | US 2000-730929 | A 20001206 |
| | WO 2001-US47958 | W 20011206 |
| | US 2004-779049 | A 20040213 |

OTHER SOURCE(S): MARPAT 137:125048
GI



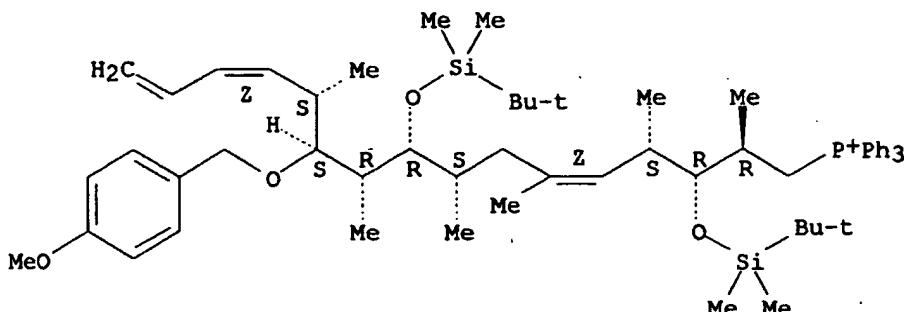
AB Discodermolide analogs, such as I [R = H, OR33; X = H2, O; R4, R9, R33 = H, acid labile protecting group; R25 = H, oxidatively labile protecting group; R16, R32 = H, alkyl], were prepared. Synthetic routes to both (-)- and (+)-discodermolide were presented.

IT 252342-54-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of compds. which mimic the chemical and biol. properties of discodermolide)

RN 252342-54-4 CAPLUS

CN Phosphonium, [(2R,3R,4S,5Z,8S,9R,10R,11S,12S,13Z)-3,9-bis[[{1,1-dimethylethyl}dimethylsilyl]oxy]-11-[(4-methoxyphenyl)methoxy]-2,4,6,8,10,12-hexamethyl-5,13,15-hexadecatrienyl]triphenyl-, iodide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.



● I-

REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2002:449643 CAPLUS
 DOCUMENT NUMBER: 137:33164
 TITLE: Preparation of compounds which mimic the chemical and biological properties of discodermolide
 INVENTOR(S): Smith, Amos B., III; Beauchamp, Thomas J.; Lamarche, Matthew J.
 PATENT ASSIGNEE(S): The Trustees of the University of Pennsylvania Center for Technology Transfer, USA
 SOURCE: PCT Int. Appl., 267 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 6
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|--------------|
| WO 2002046150 | A2 | 20020613 | WO 2001-US47958 | 20011206 <-- |
| WO 2002046150 | A3 | 20020613 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| US 2002103387 | A1 | 20020801 | US 2000-730929 | 20001206 <-- |
| US 6870058 | B2 | 20050322 | | |
| CA 2431045 | AA | 20020613 | CA 2001-2431045 | 20011206 <-- |
| AU 2002027375 | A5 | 20020618 | AU 2002-27375 | 20011206 <-- |

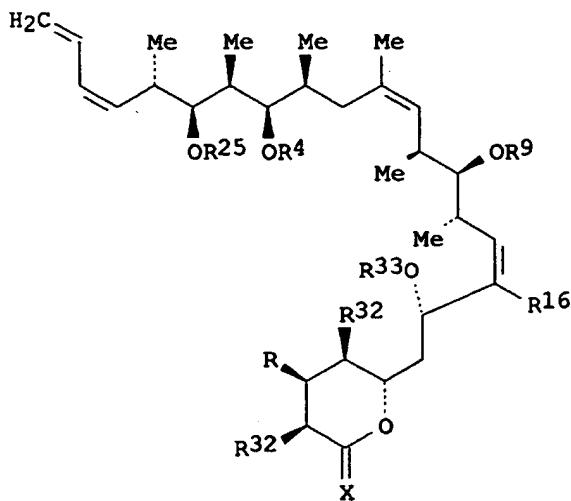
| | | | | |
|--|----|----------|----------------|----------|
| EP 1585725 | A2 | 20051019 | EP 2001-996231 | 20011206 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, FI, CY, TR | | | | |
| WO 2005079378 | A2 | 20050901 | WO 2005-US4643 | 20050211 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG | | | | |

PRIORITY APPLN. INFO.:

| | |
|-----------------|-------------|
| US 2000-730929 | A 20001206 |
| US 1996-759817 | A2 19961203 |
| US 1998-21878 | A2 19980211 |
| US 1999-455649 | A2 19991207 |
| WO 2001-US47958 | W 20011206 |
| US 2004-779049 | A 20040213 |

OTHER SOURCE(S):
GI

MARPAT 137:33164



AB Discodermolide analogs, such as I [R = H, OR33; X = H2, O; R4, R9, R33 = H, acid labile protecting group; R25 = H, oxidatively labile protecting group; R16, R32 = H, alkyl], were prepared. Synthetic routes to both (-)- and (+)-discodermolide were presented.

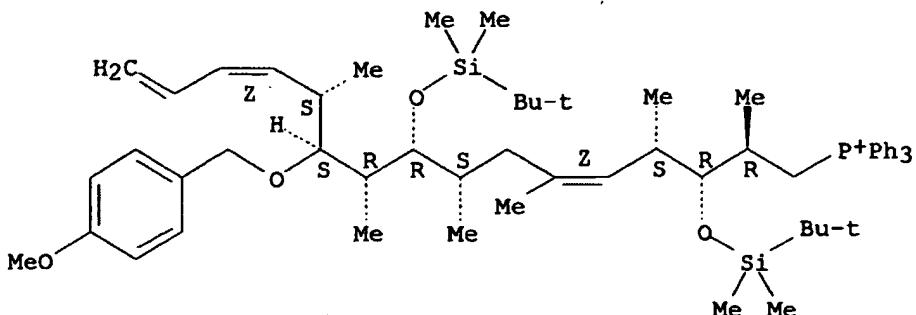
IT 252342-54-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of compds. which mimic the chemical and biol. properties of discodermolide)

RN 252342-54-4 CAPLUS

CN Phosphonium, [(2R,3R,4S,5Z,8S,9R,10R,11S,12S,13Z)-3,9-bis[[(1,1-dimethylethyl)dimethylsilyl]oxy]-11-[(4-methoxyphenyl)methoxy]-2,4,6,8,10,12-hexamethyl-5,13,15-hexadecatrienyl]triphenyl-, iodide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.



● I -

L5 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:123244 CAPLUS

DOCUMENT NUMBER: 136:183657

TITLE: Process for the biomediated preparation of intermediates for use in the synthesis of polyketides, such as epothilone D and discodermolide

INVENTOR(S): Santi, Daniel V.; Ashley, Gary; Myles, David C.

PATENT ASSIGNEE(S): Kosan Biosciences, Inc., USA

SOURCE: PCT Int. Appl., 129 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

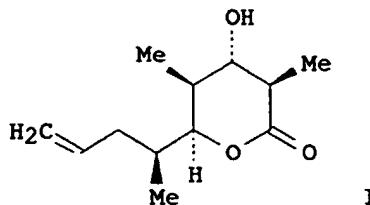
FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|--------------|
| WO 2002012534 | A2 | 20020214 | WO 2001-US25112 | 20010809 <-- |
| WO 2002012534 | A3 | 20020906 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| WO 2001092991 | A2 | 20011206 | WO 2001-US17352 | 20010529 <-- |
| WO 2001092991 | A3 | 20020808 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2417358 | AA | 20020214 | CA 2001-2417358 | 20010809 <-- |

| | | | |
|--|-------------|-----------------|--------------|
| AU 2001083275 | A5 20020218 | AU 2001-83275 | 20010809 <-- |
| EP 1307579 | A2 20030507 | EP 2001-962062 | 20010809 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | |
| JP 2004520008 | T2 20040708 | JP 2002-517818 | 20010809 |
| PRIORITY APPLN. INFO.: | | | |
| | | US 2000-224038P | P 20000809 |
| | | US 2000-237382P | P 20001004 |
| | | US 2000-248387P | P 20001113 |
| | | US 2001-867845 | A 20010529 |
| | | US 2000-207331P | P 20000530 |
| | | WO 2001-US25112 | W 20010809 |

OTHER SOURCE(S): CASREACT 136:183657; MARPAT 136:183657
GI



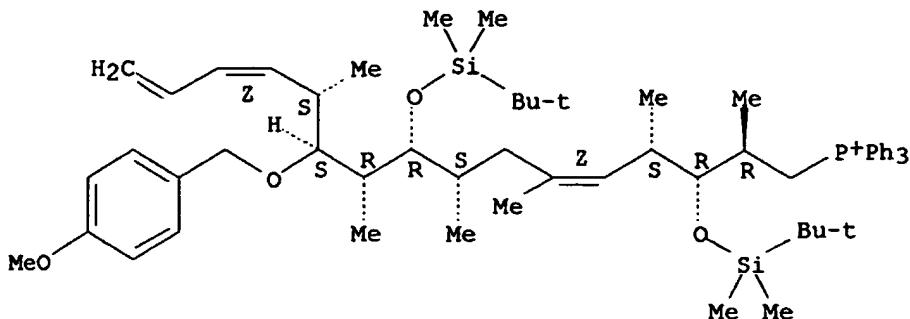
AB The present invention relates to compds., such as I, made by a subset of modules from one or more polyketide synthase ("PKS") genes that are used as starting material in the chemical synthesis of novel mols., particularly naturally occurring polyketides or derivs. thereof. The biol. derived intermediates ("bio-intermediates") generally represent particularly difficult compds. to synthesize using traditional chemical approaches due to one or more stereocenters. In one aspect of the invention, an intermediate in the synthesis of epothilone is provided that feeds into the synthetic protocol of Danishefsky and co-workers. In another aspect of the invention, intermediates in the synthesis of discodermolide are provided that feed into the synthetic protocol of Smith and co-workers. By taking advantage of the inherent stereochem. specificity of biol. processes, the syntheses of key intermediates and thus the overall syntheses of compds. like epothilone and discodermolide are greatly simplified.

IT 252342-54-4P
RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent) (process for the biomediated preparation of intermediates for use in the synthesis of polyketides, such as epothilone D and discodermolide)

RN 252342-54-4 CAPIUS

CN Phosphonium, [(2R,3R,4S,5Z,8S,9R,10R,11S,12S,13Z)-3,9-bis[[(1,1-dimethylethyl)dimethylsilyl]oxy]-11-[(4-methoxyphenyl)methoxy]-2,4,6,8,10,12-hexamethyl-5,13,15-hexadecatrienyl]triphenyl-, iodide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.



● I-

L5 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:412212 CAPLUS

DOCUMENT NUMBER: 135:19496

TITLE: Preparation of intermediates for the synthesis of discodermolides and their polyhydroxy dienyl lactone derivatives for pharmaceutical use

INVENTOR(S): Smith, Iii Amos B.; Beauchamp, Thomas J.; Lamarche, Matthew J.; Arimoto, Hirokazu

PATENT ASSIGNEE(S): The Trustees of the University of Pennsylvania, USA
SOURCE: U.S., 126 pp., 6096904 Cont.-in-part of U.S.

6,096,904.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 6

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|--------------|
| US 6242616 | B1 | 20010605 | US 1999-455649 | 19991207 <-- |
| US 5789605 | A | 19980804 | US 1996-759817 | 19961203 <-- |
| US 6031133 | A | 20000229 | US 1998-21878 | 19980211 <-- |
| US 6096904 | A | 20000801 | US 1998-121551 | 19980723 <-- |
| CA 2393968 | AA | 20010614 | CA 2000-2393968 | 20001206 <-- |
| WO 2001042179 | A1 | 20010614 | WO 2000-US32996 | 20001206 <-- |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| US 2002103387 | A1 | 20020801 | US 2000-730929 | 20001206 <-- |
| US 6870058 | B2 | 20050322 | | |
| EP 1248761 | A1 | 20021016 | EP 2000-983924 | 20001206 <-- |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| JP 2003531110 | T2 | 20031021 | JP 2001-543482 | 20001206 |
| US 2005065353 | A1 | 20050324 | US 2004-779049 | 20040213 |
| WO 2005079378 | A2 | 20050901 | WO 2005-US4643 | 20050211 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, | | | | |

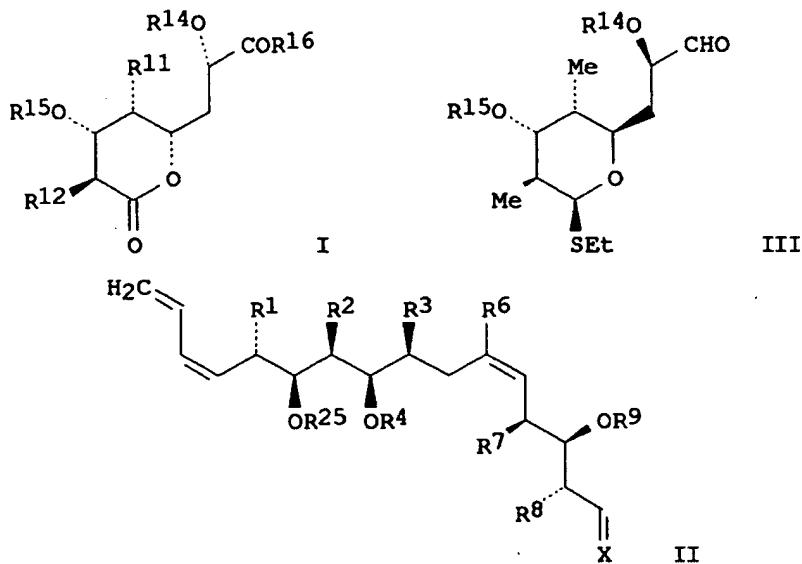
| | |
|-----|--|
| RW: | CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |
| | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG |

PRIORITY APPLN. INFO.:

| | | | |
|----|--------------|----|----------|
| US | 1996-759817 | A1 | 19961203 |
| US | 1998-21878 | A1 | 19980211 |
| US | 1998-121551 | A2 | 19980723 |
| US | 1999-455649 | A | 19991207 |
| US | 2000-730929 | A1 | 20001206 |
| WO | 2000-US32996 | W | 20001206 |
| US | 2004-779049 | A | 20040213 |

OTHER SOURCE(S):
GI

CASREACT 135:19496; MARPAT 135:19496



- AB Preparation of intermediates, such as I [R11, R12 = alkyl; R14, R15 = acid labile protecting groups; R16 = H, alkyl] and II [R1, R2, R7, R8 = alkyl; R3, R6, R16 = H, alkyl; R4, R9 = acid labile hydroxyl protecting group; R25 = oxidatively labile hydroxyl protecting group; X = :C(J)R16, a Wittig olefination formed from a pyranylalkyl ketone, such as I and II (X = P+Ph3I-)], for the synthesis of discodermolides and their analogs, which are useful as pharmaceuticals, was presented. Thus, synthon III (R14 = R15 = SiMe2CMe3) was prepared via a multistep synthetic sequence starting from (2R)-3-hydroxy-2-methylpropanoic acid Me ester. The synthetic utility of II was subsequently demonstrated by its use in the preparation of (-)-discodermolide.

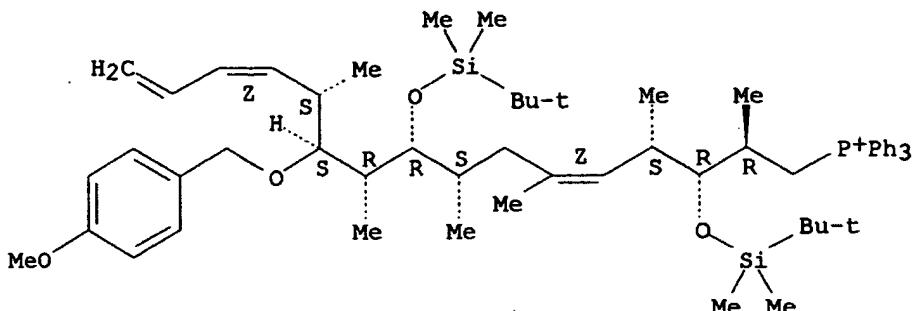
IT 252342-54-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of intermediates for the synthesis of discodermolides and their polyhydroxy dienyl lactone derivs. for pharmaceutical use)

RN 252342-54-4 CAPLUS
CN Phosphonium, [(2R,3R,4S,5Z,8S,9R,10R,11S,12S,13Z)-3,9-bis[[(1,1-dimethylethyl)dimethylsilyl]oxy]-11-[(4-methoxyphenyl)methoxy]-2,4,6,8,10,12-hexamethyl-5,13,15-hexadecatrienyl]triphenyl-, iodide (9CI)
(CA INDEX NAME)

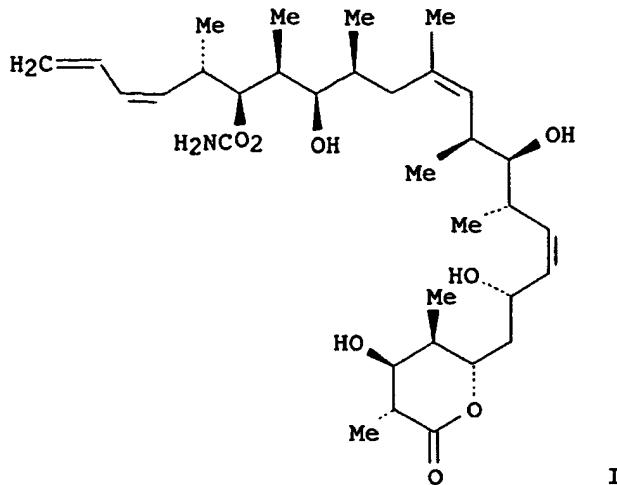
Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.



● I-

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:597937 CAPLUS
DOCUMENT NUMBER: 133:335118
TITLE: Evolution of a Gram-Scale Synthesis of (+)-Discodermolide
AUTHOR(S): Smith, Amos B., III; Beauchamp, Thomas J.; LaMarche, Matthew J.; Kaufman, Michael D.; Qiu, Yuping; Arimoto, Hirokazu; Jones, David R.; Kobayashi, Kaoru
CORPORATE SOURCE: Department of Chemistry Monell Chemical Senses Center and Laboratory for Research on the Structure of Matter, University of Pennsylvania, Philadelphia, PA, 19104, USA
SOURCE: Journal of the American Chemical Society (2000), 122(36), 8654-8664
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 133:335118
GI



I

AB An efficient, highly convergent, stereocontrolled total synthesis of the potent antimitotic agent (+)-discodermolide (I) has been achieved on gram scale. Key elements of the successful strategy include (1) elaboration of three advanced fragments from a common precursor (CP) which embodies the repeating stereochem. triad of the discodermolide backbone, (2) σ -bond installation of the Z trisubstituted olefin, exploiting a modified Negishi cross-coupling reaction, (3) synthesis of a late-stage phosphonium salt utilizing high pressure, and (4) Wittig installation of the Z disubstituted olefin and the terminal (Z)-diene.

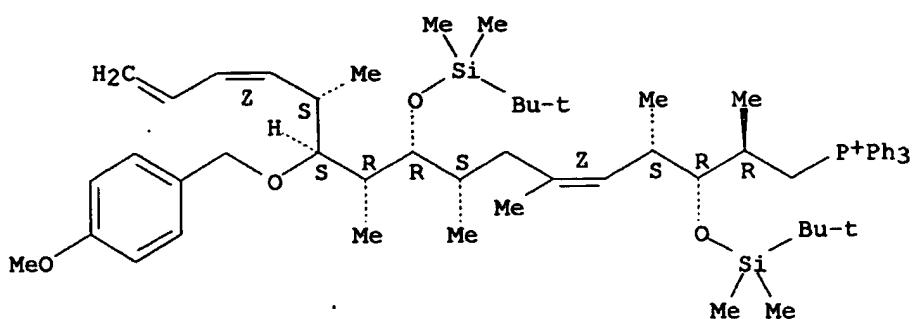
IT 252342-54-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(evolution of a gram-scale synthesis of (+)-discodermolide)

RN 252342-54-4 CAPLUS

CN Phosphonium, [(2R,3R,4S,5Z,8S,9R,10R,11S,12S,13Z)-3,9-bis[[(1,1-dimethylethyl)dimethylsilyl]oxy]-11-[(4-methoxyphenyl)methoxy]-2,4,6,8,10,12-hexamethyl-5,13,15-hexadecatrienyl]triphenyl-, iodide (9CI)
(CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.



● I⁻

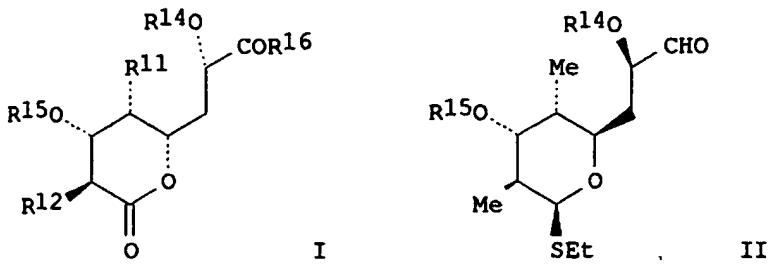
REFERENCE COUNT:

101 THERE ARE 101 CITED REFERENCES AVAILABLE FOR

THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L5 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2000:531688 CAPLUS
 DOCUMENT NUMBER: 133:135166
 TITLE: Preparation of intermediates for the synthesis of discodermolides and their polyhydroxy dienyl lactone derivatives for pharmaceutical use
 INVENTOR(S): Smith, Amos B., III; Qiu, Yuping; Kaufman, Michael; Arimoto, Hirokazu; Jones, David R.; Kobayashi, Kaoru; Beauchamp, Thomas J.
 PATENT ASSIGNEE(S): The Trustees of the University of Pennsylvania, USA
 SOURCE: U.S., 83 pp., Cont.-in-part of U.S. 5,789,605.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 6
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|-------------------|-----------------|--------------|
| US 6096904 | A | 20000801 | US 1998-121551 | 19980723 <-- |
| US 5789605 | A | 19980804 | US 1996-759817 | 19961203 <-- |
| CA 2338310 | AA | 20000203 | CA 1999-2338310 | 19990720 <-- |
| WO 2000004865 | A2 | 20000203 | WO 1999-US16369 | 19990720 <-- |
| WO 2000004865 | A3 | 20000921 | | |
| W: AU, CA, JP | | | | |
| RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| AU 9952190 | A1 | 20000214 | AU 1999-52190 | 19990720 <-- |
| AU 749844 | B2 | 20020704 | | |
| EP 1105383 | A2 | 20010613 | EP 1999-937330 | 19990720 <-- |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| JP 2002521317 | T2 | 20020716 | JP 2000-560858 | 19990720 <-- |
| US 6242616 | B1 | 20010605 | US 1999-455649 | 19991207 <-- |
| US 2005065353 | A1 | 20050324 | US 2004-779049 | 20040213 |
| WO 2005079378 | A2 | 20050901 | WO 2005-US4643 | 20050211 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| PRIORITY APPLN. INFO.: | | | | |
| | | US 1996-759817 | A2 19961203 | |
| | | US 1998-21878 | A1 19980211 | |
| | | US 1998-121551 | A 19980723 | |
| | | WO 1999-US16369 | W 19990720 | |
| | | US 1999-455649 | A2 19991207 | |
| | | US 2000-730929 | A1 20001206 | |
| | | US 2004-779049 | A 20040213 | |
| OTHER SOURCE(S): GI | | MARPAT 133:135166 | | |



AB Preparation of intermediates, such as I [R11, R12 = alkyl; R14, R15 = acid labile protecting groups; R16 = H, alkyl], for the synthesis of discodermolides and their analogs, which are useful as pharmaceuticals, was presented. Thus, synthon II (R14 = R15 = SiMe₂CMe₃) was prepared via a multistep synthetic sequence starting from (2R)-3-hydroxy-2-methylpropanoic acid Me ester. The synthetic utility of II was subsequently demonstrated by its use in the preparation of (-)-discodermolide.

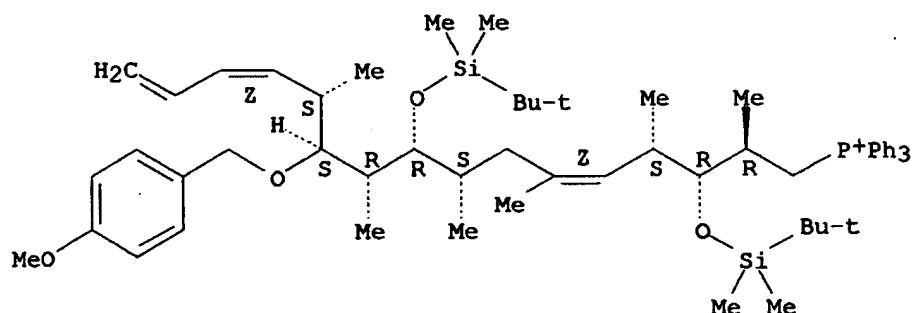
IT 252342-54-4P

RL: RCT (Reactant); **SPN** (Synthetic preparation); **PREP** (Preparation); **RACT** (Reactant or reagent)
(preparation of intermediates for the synthesis of discodermolides and their polyhydroxy dienyl lactone derivs. for pharmaceutical use)

RN 252342-54-4 CAPLUS

CN Phosphonium, [(2R,3R,4S,5Z,8S,9R,10R,11S,12S,13Z)-3,9-bis([(1,1-dimethylethyl)dimethylsilyl]oxy)-11-[(4-methoxyphenyl)methoxy]-2,4,6,8,10,12-hexamethyl-5,13,15-hexadecatrienyl]triphenyl-, iodide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.



● I⁻

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:84572 CAPLUS

DOCUMENT NUMBER: 132:137207

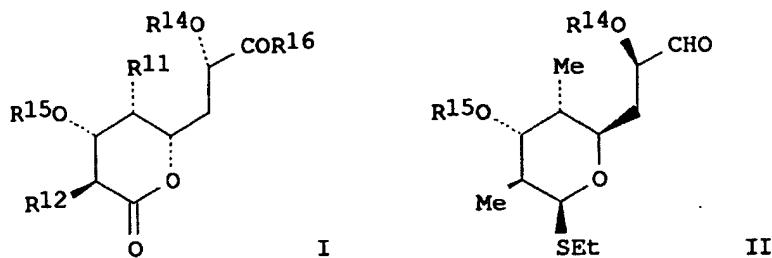
TITLE: Preparation of intermediates for the synthesis of discodermolides and their polyhydroxy dienyl lactone derivatives for pharmaceutical use

INVENTOR(S): Smith, Amos B. Iii; Qiu, Yuping; Kaufman, Michael; Arimoto, Hirokazu; Jones, David R.; Kobayashi, Kaoru; Beauchamp, Thomas J.

PATENT ASSIGNEE(S): The Trustees of the University of Pennsylvania, USA
 SOURCE: PCT Int. Appl., 201 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 6
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|--------------|
| WO 2000004865 | A2 | 20000203 | WO 1999-US16369 | 19990720 <-- |
| WO 2000004865 | A3 | 20000921 | | |
| W: AU, CA, JP | | | | |
| RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| US 6096904 | A | 20000801 | US 1998-121551 | 19980723 <-- |
| CA 2338310 | AA | 20000203 | CA 1999-2338310 | 19990720 <-- |
| AU 9952190 | A1 | 20000214 | AU 1999-52190 | 19990720 <-- |
| AU 749844 | B2 | 20020704 | | |
| EP 1105383 | A2 | 20010613 | EP 1999-937330 | 19990720 <-- |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| JP 2002521317 | T2 | 20020716 | JP 2000-560858 | 19990720 <-- |
| WO 2005079378 | A2 | 20050901 | WO 2005-US4643 | 20050211 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| PRIORITY APPLN. INFO.: | | | US 1998-121551 | A 19980723 |
| | | | US 1996-759817 | A2 19961203 |
| | | | WO 1999-US16369 | W 19990720 |
| | | | US 2004-779049 | A 20040213 |

OTHER SOURCE(S) : MARPAT 132:137207
 GI

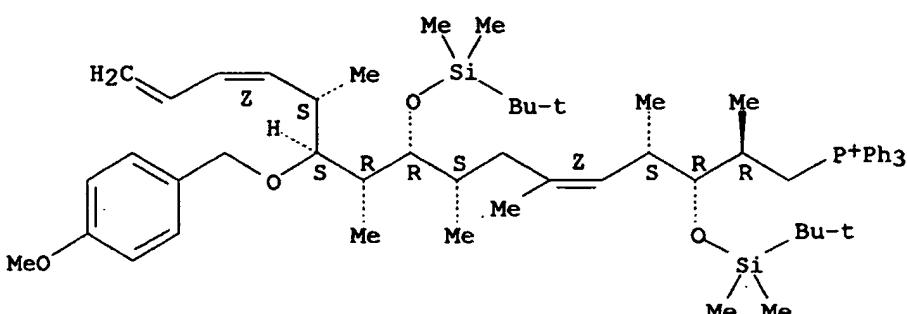


AB Preparation of intermediates, such as I [R11, R12 = alkyl; R14, R15 = acid labile protecting groups; R16 = H, alkyl], for the synthesis of discodermolides and their analogs, which are useful as pharmaceuticals, was presented. Thus, synthon II (R14 = R15 = SiMe₂CMe₃) was prepared via a multistep synthetic sequence starting from (2R)-3-hydroxy-2-methylpropanoic acid Me ester. The synthetic utility of II was

IT subsequently demonstrated by its use in the preparation of (-)-discodermolide.
252342-54-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of intermediates for the synthesis of discodermolides and their polyhydroxy dienyl lactone derivs. for pharmaceutical use)

RN 252342-54-4 CAPLUS
 CN Phosphonium, [(2R,3R,4S,5Z,8S,9R,10R,11S,12S,13Z)-3,9-bis[[(1,1-dimethylethyl)dimethylsilyl]oxy]-11-[(4-methoxyphenyl)methoxy]-2,4,6,8,10,12-hexamethyl-5,13,15-hexadecatrienyl]triphenyl-, iodide (9CI) (CA INDEX NAME)

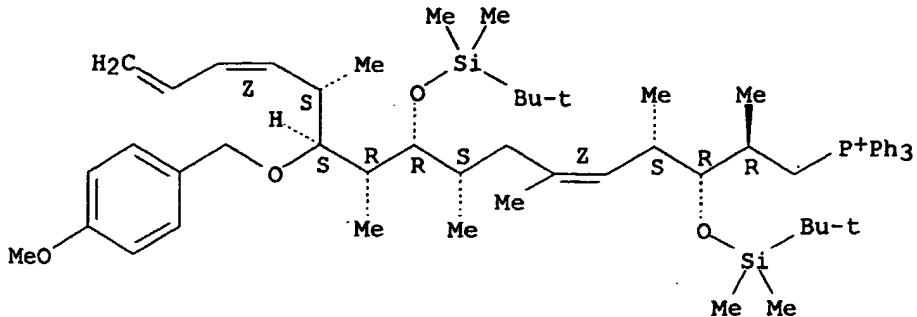
Absolute stereochemistry. Rotation (+).
 Double bond geometry as shown.



● I-

L5 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1999:694867 CAPLUS
 DOCUMENT NUMBER: 132:35548
 TITLE: Gram-Scale Synthesis of (+)-Discodermolide
 AUTHOR(S): Smith, Amos B., III; Kaufman, Michael D.; Beauchamp, Thomas J.; LaMarche, Matthew J.; Arimoto, Hirokazu
 CORPORATE SOURCE: Department of Chemistry Monell Chemical Senses Center and Laboratory for Research on the Structure of Matter, University of Pennsylvania, PA, 19104, USA
 SOURCE: Organic Letters (1999), 1(11), 1823-1826
 CODEN: ORLEF7; ISSN: 1523-7060
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB A triply convergent, highly efficient second-generation synthesis of the potent antimitotic agent (+)-discodermolide has been achieved on a 1-g scale.
 IT **252342-54-4P**
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (gram-scale synthesis of (+)-discodermolide)
 RN 252342-54-4 CAPLUS
 CN Phosphonium, [(2R,3R,4S,5Z,8S,9R,10R,11S,12S,13Z)-3,9-bis[[(1,1-dimethylethyl)dimethylsilyl]oxy]-11-[(4-methoxyphenyl)methoxy]-2,4,6,8,10,12-hexamethyl-5,13,15-hexadecatrienyl]triphenyl-, iodide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
 Double bond geometry as shown.



● I -

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 09:44:18 ON 28 FEB 2006)

FILE 'REGISTRY' ENTERED AT 09:44:27 ON 28 FEB 2006

L1 STRUCTURE uploaded
L2 1 S L1
L3 14 S L1 FULL

FILE 'CPLUS' ENTERED AT 09:45:02 ON 28 FEB 2006

L4 18 S L3 FULL
L5 8 S L4 AND PY<2003

=> log y

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|----------------------|------------------|---------------|
| FULL ESTIMATED COST | 43.29 | 210.44 |

| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
|--|------------------|---------------|
| CA SUBSCRIBER PRICE | -6.00 | -6.00 |

STN INTERNATIONAL LOGOFF AT 09:45:48 ON 28 FEB 2006